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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/423,085 11/02/99 MITSUYA

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EXAMINER

IM52/0829

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ART UNIT	PAPER NUMBER

1761
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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/423,085

Applicant(s)

MITSUYA ET AL.

Examiner

Robert Madsen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 June 2001.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 10.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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DETAILED ACTION

Acknowledgement is made of receipt of the Declaration under 37CFR 1.132 and the Amendment, both filed June 14, 2001. Claims 1-12 have been canceled. New claims 13-23 have been added and are currently pending in the application.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 13-1⁹ are rejected under 35 U.S.C. 103(a) as being unpatentable over Mitsuya et al. (JP409009878A) in view of Levin (US 3881034) Yano et al. (US 4234619), Ueda et al. (US 5487911), and Hamaguchi (US 5127953).

Regarding claim 13, Mitsuya et al. teach a powder composition comprising delipidated egg yolk powder that is spray dried and a functional food material, such as oil. Since spray dried powders are porous and Mitsuya et al. teach adding/stirring the powder with the oil, the powder would be impregnated by the oil (English Abstract). Mitsuya is silent in teaching the resulting impregnated egg powder has an angle of repose of 60°, as measured under a moisture content of 5+/-2%, 40% RH and 25°C.

Levin is relied on as further evidence of the conventionality of a powder composition comprising defatted or delipidated egg yolk powder that is dried and a functional food material, such as oils or flavors, that fills (i.e. impregnates) the egg

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powder. Levin further teaches the egg powder is *substantially* free of water (Abstract, Column 1, lines 10-65, Column 2, lines 35-50).

Yano et al. are relied on further as evidence of spray-dried delipidated egg yolks mixed with oil to produce a food having a moisture level of about 5% (Abstract, Column 2, lines 10-14, Example 3, Column 10, lines 45-65).

Ueda et al. are also relied on as evidence that spray dried egg yolk particles having a moisture content of 3 to 5% and are generally spherical in shape have a particle size between 5 and 100 microns (Column 2, lines 54-62 and Column 3, lines 1-5).

Hamaguchi is relied on as evidence of the conventionality of preferably spherical particle-based powders of less than preferably pass through a 100 Tyler Mesh (i.e. are less than 150 microns) having a water content of less than 15%, preferably less than 10%, that, when impregnated with oil, have an angle of repose less than 70° (i.e. 43°, 44°, 53°, 39°, etc. in the Examples). Hamaguchi teaches the base material for these dried powders include eggs, the intended purpose is as a food additive, and that the water content affects the flowability, which affects the angle of repose. (Abstract, Examples, Column 4, lines 29-62, Column 5, lines 5-11, Column 5, line 34 to Column 6 line 19)

Therefore, although Mitsuya et al. is silent in teaching a particular moisture level of the particles, it would have been obvious that the moisture level of the particles would have been about 5% moisture (i.e. +/-2%) since it was well known in the art that spray dried egg yolks delipidated and spray-dried egg yolks both conventionally have about

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5% moisture or less. It would have been further obvious that the particles taught by Mitsuya would have had an angle of repose of less than 60°, as measured under a moisture content of 5+/-2%, 40% RH and 25°C (or room conditions) since (1) spray dried egg yolks will be spherical and have a particle range of 5-200 microns and (2) spherical shaped dried egg-based particles of less than 150 microns, having less than 10% moisture particles, and impregnated with oil will have an angle of repose less than 60°. and (2) spray dried an angle of less than 60 size or morphology, it was well known in the art that spray drying egg yolk particles will result in a particle size range of 5 to 200.

Regarding claim 15, Mitsuya et al. teach 16%, 25%, and 33% oil, or within 5 to 60% as recited. Levin is relied on as further evidence of adding the functional food material (i.e. the oil) at the *up to* the same level as the fat removed (Column 2, lines 35-50) which is would be *up to* 60% (i.e. it is well known in the art that egg yolk comprises about 60% fat). Therefore it would have been obvious to add anywhere up to 60% fat since it was known to add anywhere up to 60% fat to dried delipidated egg particles and adding any level between 5% to 60 % would have been an obvious result effective variable of the particular final product in which it was intended..

Regarding claim 16, Mitsuya et al. teach oil, which is a substance that is susceptible to deterioration by light, heat or oxygen .

Regarding claim 17, Mitsuya et al. teach the egg yolk is fat and cholesterol free, or the lipid content is less than 10% (Page 2, lines 16-19 of Partial English Translation).

Regarding claim 18, Mitsuya et al. teach a spray drying a delipidated egg yolk, which is well known in the art to result in a porous particle. Mitsuya et al. are silent in

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teaching a pore size of the particles. However, it is well known in the art that the process parameters of spray drying include air pressure and air temperature.

Therefore, the size of the pores formed in any particle would be obvious result effective variable of the particular air pressure and process temperature selected for the process.

Regarding claim 19, Mitsuya et al. teach the resulting powder composition may be used with beverages or confectionaries.

Claims 20-22³ are rejected under 35 U.S.C. 103(a) as being unpatentable over Mitsuya et al. (JP409009878A) in view of Yano et al. (US 4234619) and Broderick et al (US 5139787).

Regarding claim 20, Mitsuya et al. teach mixing delipidated egg yolk with water, spray drying the mixture (spray drying results in a porous particle), and mixing the particles with a functional food material (i.e. oil). However, Mitsuya et al. are silent in teaching the oil/egg mixture is also dried under reduced pressure while mixing.

Yano et al. are relied on as further evidence of spray-dried delipidated egg yolks mixed with an oil to produce a food (Abstract, Column 2, lines 10-14, Example 3, Column 10, lines 45-65) .

Broderick et al. are relied on as evidence of the conventionality of impregnating a porous particle with a functional food material by means of drying under reduced pressure. (Abstract Column 5, lines 39-55).

Therefore, it would have been obvious to modify the method of Mitsuya et al. and use reduced pressure to dry the particles since it was well known in the art that porous

particles mixed with functional, liquid materials are dried under reduced pressure to impregnate the particles. One would be substituting one known porous particle for another in the same process for the same purpose: impregnate a porous particle with a functional food material.

Regarding claim 21, Mitsuya et al. teach stirring the delipidated egg yolk particles with the functional food material (Abstract).

Regarding claim 22, Mitsuya et al. teach solvent extraction (Abstract).

Regarding claim 23, Mitsuya et al. teach ethanol at 100-200 parts per 10 parts egg yolk (i.e. 1000 –2000 parts per 100 parts yolk) in order to delipidated the yolk, which falls within the range of 400-5000 per 100 parts.

Response to Amendment

The Declaration under 37 CFR 1.132 filed June 14,2001 is insufficient to overcome the rejection of the claims based upon U.S.C. 103(a) as set forth in the last Office action because: The method followed for the preparing the delipidated egg yolk particles by the Mitsuya '878 reference is only one of the possible methods disclosed. Mitsuya et al. teach both spray drying and vacuum drying, but the experiments run only compared vacuum drying to the method of the present application. Spray drying would provide a different porosity and morphology than vacuum drying, resulting in a different flowability and flavor. . Furthermore, the experiment also measured the porosity of the spray dried of the present invention, but such data was not provide for the vacuum dried material.

Therefore, to compare these the powder compositions of spray-dried particles to vacuum dried particles is not valid. In view of the foregoing, when all of the evidence is considered, the totality of the rebuttal evidence of nonobviousness fails to outweigh the evidence of obviousness.

Response to Arguments

Applicant's arguments filed June 14, 2001 have been fully considered but they are not persuasive.

Applicant argues that the Mitsuya reference (JP 409009878) does not teach the method of stirring into a homogeneous mixture under reduced pressure. However, it is noted that the these particular limitations upon which applicant relies are not recited in the rejected claim made under U.S.C. 102 (b). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Furthermore, applicant's argues that there is no suggestion to combine the references of Ueda, Yano, and Broderick with Mitsuya. The examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Broderick is relied on as teaching a method of impregnating a

porous particles with a functional food, like Mitsuya. However, Broderick teaches the recited method of stirring a mixture under reduced pressure. Ueda is relied on as evidence of general spray-drying properties (e.g. size and shape) of egg materials. Once spray drying delipidated egg yolks was known, one skilled in the art would have expected the general shape and size of delipidated egg yolks to be close to that full fat egg yolk. Yano is relied on as evidence of stirring a spray *dried* delipidated egg yolk with oil.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Madsen whose telephone number is (703)305-

0068. The examiner can normally be reached on 6:30AM-4:00PM Mon-Fri (except alternate Fridays).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on (703)308-3959. The fax phone numbers for the organization where this application or proceeding is assigned are (703)305-3599 for regular communications and (703)305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0661.

Robert Madsen 
Examiner
Art Unit 1761
August 26, 2001


MILTON I. CANO
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